

# Wage Scales and the Living Costs

Scientific Analysis of Advances of Both Compared With the 1914 Basis Shows Startling Results From an Economic Viewpoint—Leonard Blakey's Last Work Offers Many Surprises for Labor, Capital and the Public.

Leonard Blakey, economist and professor, from whose last work the following analysis of Wage Scales and Living Costs was taken, was killed accidentally by an automobile in Chicago recently just as he was to reap the fruits of years of study. He was born thirty-eight years ago in Racine, Wis., was educated in the public schools there and in Iowa, and was graduated from Beloit College, taking a post graduate course at Columbia University in this city.

He was an instructor in economics in Tufts College and at Dickinson, and then was attached to the Carnegie Institute of Technology. During the war he was the labor expert at the Mussels Shoals air nitrate enterprise. Last January Mr. Blakey began his study of wage increases and living costs with the idea that the findings might be of value to the nation in its reconstruction problems. When his report was partly completed he was urged to publish it in book form for use as a textbook at Columbia and at Carnegie Tech. He also planned to send copies for use of the Industrial Conference in session in Washington.

Owing to conditions in the book trade in New York, Mr. Blakey went to Chicago to get speedy publication. The A. W. Shaw Company took up the work. He met his death as he was on his way to have his final revision of the last chapter retyped for the printers.

TOIL'S actual gain in fortune as a result of the inflated prices and wages which resulted from the European conflict and the relation of these radical changes to the future are admirably analyzed in the book of Leonard Blakey, which he entitled "Has Labor Carried Its War Burden?"

He finds that some classes of labor, notably the shipyard workers, have profited unduly by the war. At the door of those who were supposed to have so patriotically toiled to build "the bridge of ships," and thereby gained wages which were in times of peace considered almost fabulous, he lays the blame of much of the present industrial unrest.

Dr. William H. Nichols in a recent address urged upon the workmen that he made research his motto and by thoroughly understanding the industry in which he was enrolled he better prepared to consider the matter of wages. For both the man who works with his hands and the man who uses more of the mental energy and less of the physical there is much that will prove helpful in this carefully prepared study of Mr. Blakey. He draws the line so sharply between the kinds of wages which are largely absorbed in meat and butter and eggs and the wages which are the inducement to turn into automobiles and music machines that to grasp the principle on which his research is founded one should begin with him on common ground. Those of the middle class which adhere to no union and have no great capital especially will find much in what he brings to a thorough understanding of this economic mill between the upper and rather mistletoes of which they are being constantly ground.

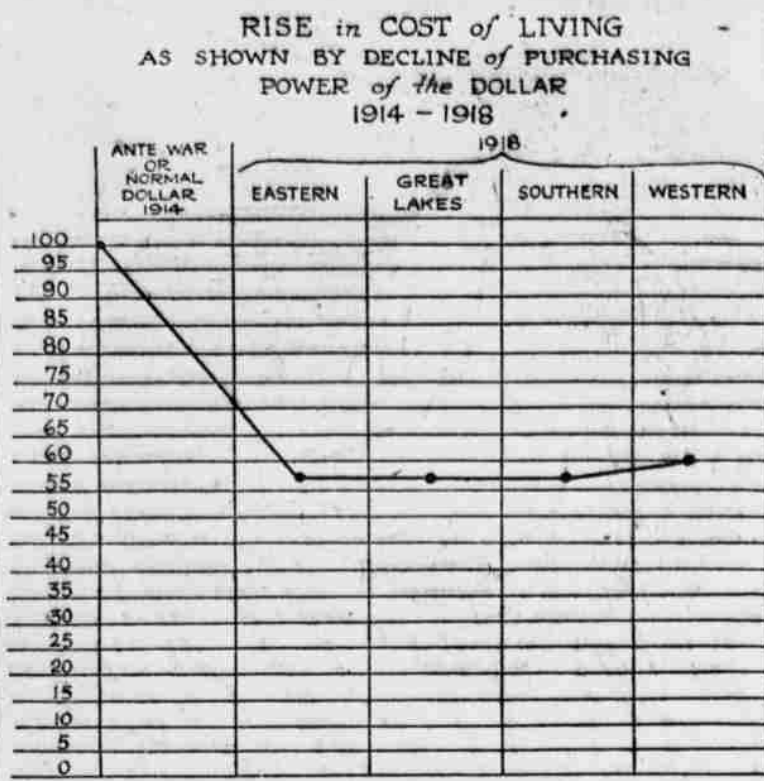
**Workers Profit Abnormally?**  
"The question is," asks Mr. Blakey, "did all the workers profit immoderately from the necessities of war? Boards of health both in the large cities and the large industrial centers report significant changes in the living conditions of the workers. The new conditions on the one hand indicate the high cost of living on the family dietary, and particularly on the child's dietary, many women forced into industry to add to the family income, debts incurred to meet the high cost of living, and an increasing number of families either taking in boarders to supplement the family income or dependent upon charity, and a readjustment of amusements, clothing and insurance by the family."

The investigator finds, for instance, that in a survey of 2,100 families made by the New York City Department of Health, that in some cases the index had eliminated meat entirely from their diet and that 43 per cent. had ceased to buy eggs. In nearly one-third of these families the use of milk was either eliminated, considerably reduced or loose milk substituted for the bottled. Hence, in some cases at least, "the war has resulted in the 'unlucky wages,'" as he puts it, but in privation, suffering and in hungry children.

He defines profiteering as the taking of an exorbitant profit and also the refusal, in view of the burdens of the war, to accept a constant, or declining, "real wages."

"It is very apparent," he continues, "that enormously high money does not necessarily indicate well being on the part of the worker. Wages are, after all, measured by what they buy. If the living costs have doubled the workers' money wage must be doubled to guarantee that no change shall be made in the standard of living. Real wages are the actual commodities that the money wages will buy."

**1914 as Basis.**  
Mr. Blakey uses as the base year for his calculations the year 1914 for which the Bureau of Labor Statistics, which show that from December, 1914, to December, 1918, the cost of living had risen 77 per cent. The food, high as it is, is only reckoned as two-thirds of the family budget, being put down as retail prices and rent; fuel, light and clothing and sundries are also taken into account. Under sundries he classifies expenditures for insurance, education, amusement, physicians' fees and various miscellaneous expenditures. These five leading items of expenditures are carefully adjusted.



Unlike most economists, Mr. Blakey takes into his reckoning the wide differences in the cost of living throughout the United States. He did much original work along this line, which makes his contribution of especial value.

He prepared a chart, for instance, in which he demonstrates that the cost of living had risen 70 per cent. in the eastern district of the United States; 75 1/2 per cent. in the South and 83 1/2 per cent. in the West. In this chart he uses the words "purchasing power" in a somewhat different sense than that employed by some investigators in this line.

"By this I mean," to quote from the book, "that in the Eastern district, for example, since the cost of living has risen 77 per cent. over the cost of 1914, the laborer could purchase with his dollar in December, 1918, only what he got by expending 56 1/2 cents in December, 1914. In other words it took \$1.77 to buy what was purchased with \$1 at an earlier date. If, purchase in 1918 what 56 1/2 cents did at an earlier period. In like manner \$1 in December, 1918, could buy in the Eastern district only what 57 1/2 cents would do in 1915. Doubling the apparent wages, that is money wages, in this latter instance means a 14 1/2 per cent. rise in real wages, instead of a 100 per cent. rise."

**The Plumb Plan Again.**  
One of the most striking instances of the relation of money and of real wages is that furnished by the railroads, which are under Government supervision and therefore subject to the control of the various wage fixing boards. The condition of the railroads has come up much in the last few months in connection with the discussion of the Plumb plan, under which the transportation system would be "democratized," that is passed under the control of the labor unions to a large extent.

Mr. Blakey had access to the books of a certain railroad which he designates as "K" and from the study of the earnings of three classes of employees, the boiler makers, the machinists and the mechanics' helpers, he shows that although there were substantial increases in money wages in some cases the real wages did not come up to the increase in the cost of living. In the chart herewith given he indicates the decrease on "real wages" basis by making those percentages with asterisks. His chart is as follows:

**Basic Rates and Earnings of "K" Railroad.**

	1915	1916	1917	1918	Per cent. Change, 1915 over 1918.	Change in Real Wages
<b>BOILER MAKERS</b>						
Average basic rate	\$310	\$320	\$345	\$350	11.3	25.9
Average hourly earnings	\$345	\$353	\$373	\$373	7.1	1.3*
Ratio, earnings to rates	112.2	113.4	112.5	112.3	1.2*	
<b>MACHINISTS</b>						
Average basic rate	\$19	\$20	\$22	\$22	13.2	22.2
Average hourly earnings	\$22	\$23	\$25	\$25	13.6	4.5
Ratio, earnings to rates	115.8	115.0	113.6	113.6	1.9*	
<b>MECHANICS' HELPERS</b>						
Average basic rate	\$230	\$230	\$240	\$240	4.3	12.3
Average hourly earnings	\$250	\$250	\$260	\$260	4.8	8.8
Ratio, earnings to rates	108.7	108.7	108.3	108.3	1.4*	

\* Shows decrease.

"the machinists and the boiler makers, were paid on the piece rate basis before the Railroad Administration established the time rate basis. The basic hourly rate for the shops of this particular railroad were available in the reports of United States Bureau of Labor Statistics. The rates were somewhat lower than the union scale for those trades. The chart shows that a serious error would have arisen had the increase in real wages been measured on the basis of the rates per hour. The boiler makers, for example, would have gained a 26 per cent. increase in real wages on the basis of rates per hour, while in fact the real wages of this craft fell 13.16 per cent. This one instance should be sufficient to warn the reader against placing any credence in the use of basic rates to measure the rise in real wages. The machinists gained a 4 1/2 per cent. increase in real wages, while the rate basis would have shown 22.5-10 per cent. increase. The error in the case of the boiler makers is so extreme, since many of this craft have throughout the period been paid on time rate basis. The chart shows also that piece work may be quite as advantageous to the worker as it is to the management. With the boiler makers in 1917 the advantage was a 20 per cent. increase in earnings. The "K" Railroad, it might be added, is one of the best managed and in general the most successful railroad in the eastern district.

As provided by Congress, the President appoints a commission with Gen. George W. Go. as chairman,

to observe the operation and effects of the Adamson law. On the basis of the first month's experience, January, 1917, the commission found that the compensation increased 2.7 per cent. in the passenger service, 15 per cent. in the freight service and 25.6 per cent. in the yard service. Besides the wide difference between the percentage increase in the eastern as compared with the southern and western districts indicated that an increase of facilities or other adjustments, not to mention the variations in the volume of traffic, might reduce the amount of overtime. Actual experience shows that the operation of the law in the first month was subject to marked modification.

The author then prepared a chart showing the real wages of the brotherhood, from which the accompanying diagram has been adapted. It uses for purposes of comparison only the wages of the Eastern division. Except in the case of the road freight firemen and helpers these men associated with the Brotherhood of Railroad Trainmen, did not receive sufficient advances, according to the Blakey figures, to meet the higher cost of living.

A similar diagrammatic illustration prepared from the Blakey figures, and for the purposes of comparison using only the wages of the Western section, shows that all classes of employees classified as under the designation "railroad telegraph, shop craft and common labor," kept above the basic line which marks the beginning of real wages with the exception of the boiler makers, who came out one-tenth of a per cent. below it. On the basis of these figures Mr. Blakey aligned himself on the side of the brotherhoods.

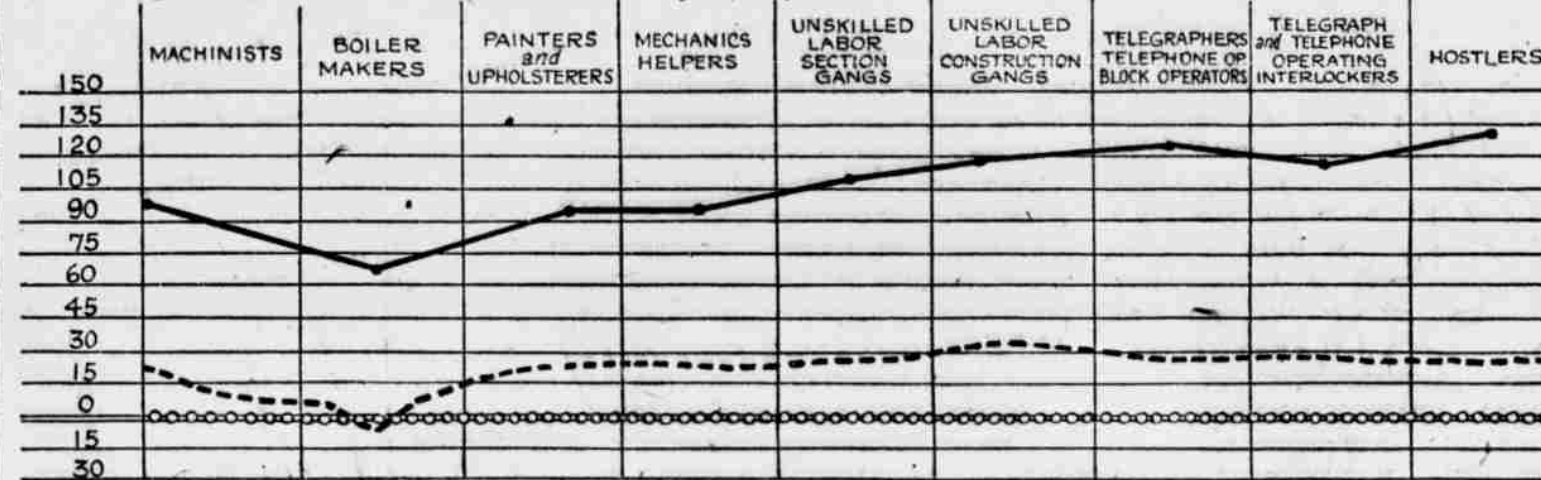
"The effect of the eight hour law," he writes, "is apparent. While it increased the earnings in 1917 on the basis of the number of hours worked—in all of the freight brotherhoods, as it was supposed to do, it raised the earnings of the Eastern passenger firemen and all of the passenger conductors as well. In only two particulars, however, were these increases in earnings sufficient to keep pace with the rise in the cost of living in 1917—the road freight engineers and the firemen in the Eastern district—and in no case did the increases compensate for what was lost in 1916, for in 1917 real wages had fallen for all the brotherhoods. With only two exceptions, the Western passenger engineers and firemen, had the earnings in 1916 risen as fast as the cost of living. It would appear then that the politicians are, after all, no more accurate prophets in railroad affairs than they are in the other departments of economic life. It is a pity that the whole country should have been filled



LEONARD BLAKEY

## RAILROAD TELEGRAPH SHOP CRAFTS and COMMON LABOR

UNBROKEN LINE - INCREASE IN UNIT COMPENSATION  
DOTTED LINE - CHANGE IN REAL WAGES  
BEADED LINE - BASIC RATE OF 1914



with the righteous indignation over the holdup of the brotherhood—the struggle of a group of honest and faithful workers to get enough money to meet the rise in the cost of living and which they did not succeed in eventually getting.

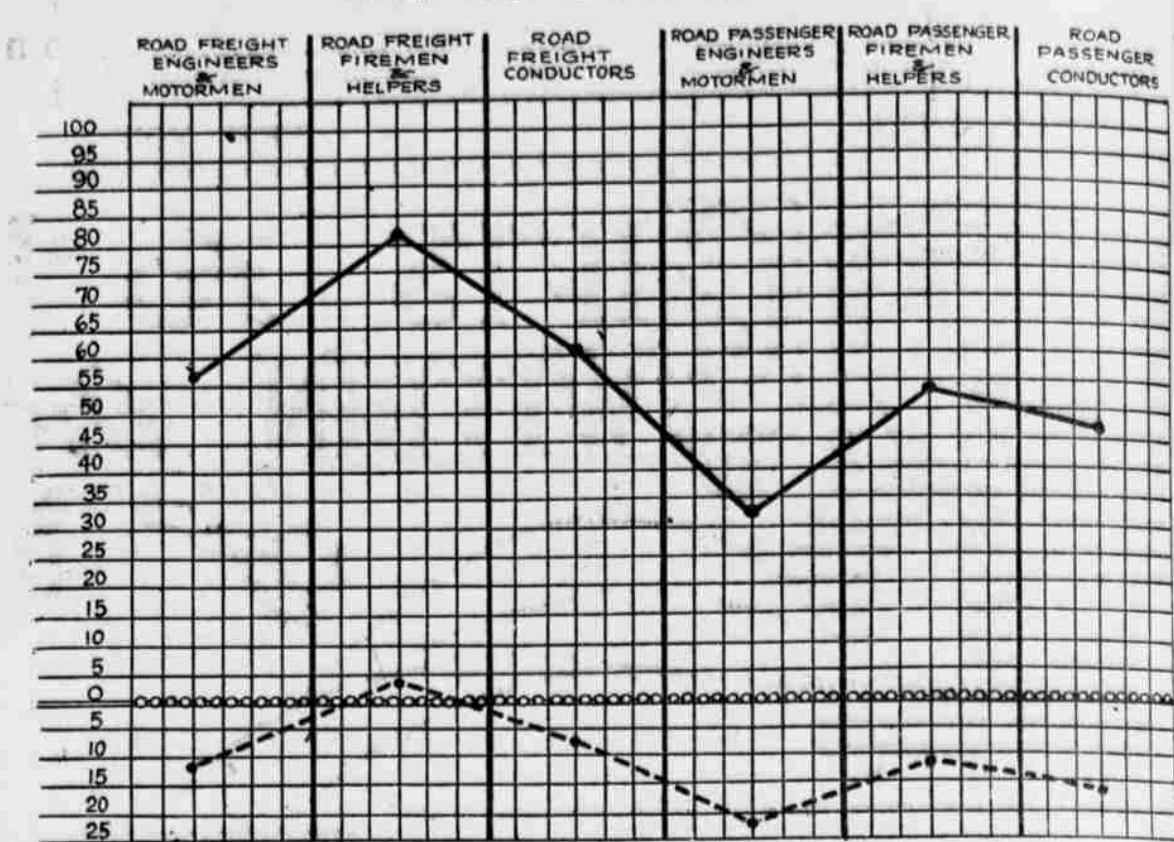
"One of the first acts of the Director-General of the Railroads was to create a commission with instructions to investigate the status of railroad wages and working conditions. General Order No. 27 issued on May 25, 1918, was the result of the recommendation of the Wage Commission. Increased cost of living since December, 1915, was the basis of computation adopted. To this was applied the humanitarian theory that the increased cost of living had fallen heaviest on the low paid employees, with the result that percentage increases based on wages in effect in December, 1915, were added. This advance increased the operating cost of the railroads approximately three hundred million dollars a year. The railroad charts will show, however, that the brotherhoods' real wages had fallen fully as far in 1917 as had those of the laborers and the shop crafts."

**When Conditions Change.**  
The author observes that when we pass from the brotherhoods to the telegraph and shop employees the conditions change and that it is hard to believe that both groups of workers could have been under the same administration. The increase of wages by the Railroad Administration brought the wages of the shop workers to a parity with the living costs and in fact a little above par, and he therefore maintains that there is no reason why the railroad shopmen should insist on an increase in wages. He says that the way to make the railroad

boiler maker contented is to reduce the rate in the shipyards.

"During the period covered by this study," Mr. Blakey adds, "the railroad shop crafts have been in the process of organization. A conservative estimate places the enrollment to-day at less than 50 per cent. of the workers—another contrast with the brotherhoods. The restive attitude of the shopmen toward their international officials—the Grand Lodge—in the threatened tieup of the railways last August is indicative of their inexperience and immaturity with American trade union policy. To the writer the ominous uneasiness among the workers everywhere—on the railroads, steam and electric; in the mines and in the factories—is not altogether due to a war within the trade unions. It is not always that a faction in the union membership is restive under restraint, as would appear with the railroad and the iron and steel workers to-day. The facts are rather that an ever increasing number of workers refuse to believe that the dawning industrial democracy will prove in the end anything other than that bygone industrial autocracy they have been working under. It is this concern that is causing many workers, both in and out of union affiliation, to question the judgment of the union leaders in continuing the close cooperation with business that obtained during the war."

It remains to be seen whether for the more vigorous and more comprehensive in America in the past the new recruits to-day, altogether restive, would be amenable to authority. The advocates of a new day are not very numerous, however. The more I hear the more convinced am I that the rank and file of American labor does not propose to substitute Socialism in any degree for the cooperation union



UNBROKEN LINE SHOWS APPARENT MONEY WAGES  
DOTTED LINE SHOWS REAL WAGES  
BEADED LINE - BASIS OF 1914

leaders are effecting with capitalistic industry.

Mr. Blakey then addressed himself to the street railway industry, which he declares has reached the parting of the ways. None too prosperous before the war, he declares that many of the

employees did very well and kept their agreements, or accepted arbitration, except in one instance. The present strike began after the death of the

analyst. He comments on the excellence of such a programme as far as some classes of marine workers are concerned, in view of the great instability of the men who go down to the sea in ships as a class.

**Lake Seamen.**

"Labor turnover," he asserts, "amounts at times to 1,600 per cent. and normally remains about 300 per cent. level. Most seamen live a kind of carefree and roving life and frequent changes of employment have been considered to be a part of the seaman's calling. So extensive has been the shifting of the workers on the great lakes that the Lake Carriers Association—composed of vessel owners and managers operating vessels upon the great lakes, principally such as carry iron ore, coal and grain, articles which make up the bulk of the tonnage on the lakes—has endeavored to recruit their crews from the ranks of the southern Europeans, most of whom are frugal in their habits of living, anxious to earn and anxious to save and for the most part unacquainted with unionism or collective action of any sort. Charts show that the association gave the significant increases in wages to seamen as distinguished from licensed officers and engineers."

"The comparatively recent growth of the Lake Carriers Association and the increasing expansion of our merchant marine during the period covered by this study is a further consideration to make the Shipping Board's record remarkable. The chart shows the rise in real wages, since the rates are rates per month and hence are calculated on a better basis than the longshoremen. The Shipping Board issued between May 13 and July 10, 1918, a number of wage scales covering the complete field of employment on coastwise vessels, and made these awards retroactive to May 4, 1918. The 1918 scale, which shows the substantial increases which resulted from these decisions, and from the scales of the Lake Carriers Association. We have seen that the association raised the wages of seamen over the advance in cost of living. The reason for this is found in the low scales paid this class of labor in 1914. The Shipping Board for its part raised the scales slightly above the cost of living increase in a very few instances. In most cases the seamen and the officers' wages were, as we found with the traction company employees, slightly below the level of real wages in 1914. The longshoremen, far from better than did the seamen. It is very apparent that the lake and harbor workers, along with the railroad train crews and the platform men, have carried their share of the burden of the war."

**Wages Chaotic.**  
"The wage rates in 1914," he says, "were in a chaotic state. To-day the War Labor Board has standardized the wages of the electric railway industry. The poorly paid workers in 1914 are now enjoying a wage near the minimum of comfort level. Furthermore, the unionization of the street railway employees has gone forward rapidly. We may expect therefore no serious cut in wages until a corresponding fall has occurred in the cost of living. This leaves the future of the industry somewhat uncertain. In the present crisis many corporations have cleaned house and have substituted assets for the water in their capitalization. It remains to be seen whether for the more vigorous and more comprehensive in America in the past the new recruits to-day, altogether restive, would be amenable to authority. The advocates of a new day are not very numerous, however. The more I hear the more convinced am I that the rank and file of American labor does not propose to substitute Socialism in any degree for the cooperation union

**Conditions on the Coast.**  
"On the coast the seamen voluntarily accepted the conditions of work established by the Shipping Board. These were less favorable to union labor than those prevailing before the war. Especially was this true of the Pacific Coast, where at the outset of the war the seamen were about 95 per cent. organized."

"On the great lakes marine labor issues centre very largely around the policy of the Lake Carriers Association. The most important and virtually the dominating member of the association is the Brotherhood of Ship Stewards, a subsidiary of the United States Steel Corporation. As Gov. Bland points out the task before the Shipping Board was to try to maintain unimpeded traffic in a district where the labor policy followed by the association and the principles believed in by organized seamen of the lakes have been so diametrically opposed that a peaceful adjustment of labor issues had at many times seemed out of the question. For many years the basic policy of the association was adherence to the open shop. The association, it would seem, will learn from the war experience the advantage for the future of a more liberal policy in dealing with its employees."

"This survey shows that the war has not benefited unduly all transportation workers. The organized trades—the railroad, the Brotherhood of Ship Stewards and engineers on the vessels and the Western seamen, with the single exception of the railway telegraphers—have carried the burden of the war through a declining real wage. The unskilled workers and those trades unorganized in 1914, on the other hand, are enjoying to-day a new standard of living made possible by the rise in real wages. Of this change they are conscious and the organization has gone forward rapidly. These workers propose to hold the advantage they have gained through the war. To a survey of a second group of industries—those producing consumable goods—we now turn."

Taking up such industries as refer to articles which enter into the

consumption, such as meat, shoes and clothes, the investigator found that most of the workers received not only high money wages, but that their real wages also reached a very high level.

In the packing houses of Chicago and other cities where large numbers of animals are slain and utilized there are many kinds of workers, some of whom are very skilled and often considerably less so. Some of the operations, in fact, are put into the hands of persons of low intelligence. There has been, however, a general rise in wages, owing to the fact that the Federation of Labor, which has long maintained an aloof policy toward the unskilled laborers in this industry, has been forced to negotiate with the stockyard following into its fold.

The workers in this industry have profited from the war as few other workers have done, as they are enjoying high wages and an eight hour day. The common laborers in this industry, men who perform tasks which may be considered as far from skilled, were receiving in 1913 only 17 1/2 cents an hour. The basic rate went to 2 1/2 cents in 1916, to 27 1/2 in 1917 and to 46 1/2 cents an hour in 1918. This means an increase in money wages of 167 1/2 per cent. and an actual real increase, taking into consideration all the advanced costs of living, of 54.9 per cent.

**What the Shoemakers Get.**  
Although shoes are very high, investigation does not indicate that the worker who toils in making them is getting much out of the enormous costs which the public has to meet for its footwear.

"The prices of shoes," writes the analyst, "are still advancing more rapidly than at any time during the war. The increase from March to September this year has exceeded the increase from the beginning of the war until March. An important factor in this advance, we are told, is advanced labor costs. These advances are in error, however, for a sufficient clear explanation for the high price can be found in the market and in the shop."

"Labor is not getting as much of the advance as price as in the shoe manufacturers and distributors for labor costs, as our analysis shows, have advanced scarcely 50 per cent. over pre-war rates, a sum sufficient to keep pace with the increase in the cost of living. In fact, of the selected crafts, no one but the shoemakers have received advances in real wages. It is not strange that these gains should be found in the later periods of manufacture. Once the market cut it is to the interest of the manufacturer to have the shoes finished and marketed. Among these workers, who have hardly gained much of the validity of the old adage—all shoemakers go barefooted."

"The reduction of output of shoes and shoes were the principal factor in the price rise in the quarter ending March, 1919, as compared with the reduction in the quarter ending with December, 1918, shows a reduction of more than 25 per cent. This reduction is even greater with women's and children's shoes. The full explanation of the high prices between now and labor cost and underproduction, however. The enormous increase in cost of production arises from a limited leather supply, resulting from the regulation of production of hides and skins, leather and hide production and shipping."

The material rise in the wages of the garment workers is attributed to various causes, such as the death of labor, the reaction from the disastrous strike of 1915 and to the conditions of the trade agreement under which they are working. The sets forth that on the whole it is generally felt that this industry is the way to fair adjustment and that the wage earner will thereby receive wages which will guarantee a standard of living near the minimum of comfort, a work week of forty-four hours, standard union conditions of work and real participation in the functioning and the determining of the functions of work. Out of this arrangement as this Mr. Blakey predicts that there will come a constant united and a contented group of workers and a development on their part of a real sense of responsibility."

The survey will be concluded in next Sunday's SUN, the final installment containing an analysis of the coal, steel and shipbuilding industries, with something of an analysis concerning the professional and commercial classes, and accompanied by an appendix showing up of the conclusions which the writer offered as a means of solving some of our most vexing economic problems.

## Facts and Fables of the Tarantula

THE famous tarantula, sometimes represented as one of the terrors of the arid portions of the Southwestern States and northern Mexico, is not really, it seems, the tarantula of history and of fable.

An eminent authority in such matters, in remarking that the tarantula is a "spider," says of that terrifying creature that it is the *Lycosa Tarantula*, a species of spider found in some of the warmer parts of Italy and Spain. When full grown it is about the size of a chestnut and of a brown color. Its bite was at one time supposed to be dangerous and to induce a kind of "dancing disease," but now it is known not to be worse than the sting of a common wasp.

It is an old fable, extending to remotest times, that the bite of this spider would produce epilepsy or a strange dancing mania in its victims and that this epileptic mania could be relieved only by a particular kind of music. The tarantula of Italy and Spain—and it is found in those countries to-day—has hairy legs with black markings on them.

It is very likely that when the early Spanish explorers came upon the great spider of the Southwest, and seeing a good deal of resemblance to the tarantula of the Old World, those explorers, not being entomologists, called the new spider a tarantula. And the name has persisted.

There seems to be no doubt that the

big spider of Arizona, New Mexico, California, old Mexico and many other places is a relative of the tarantula of Spain and Italy, and in color, disposition and the feature of hairy legs like the tarantula. But perhaps there is not much in a name so far as spiders go, and it is just as well to avoid if possible that particular spider which so many Americans call the tarantula, though it is quite certain that the meanness of its disposition has been exaggerated.

Another authority, who has for years made intimate study of spiders, says that when undisturbed spiders never bite anything except insects useful as their food, but that when attacked or cornered all species open their jaws and bite if they can, depending on the size and strength of their jaws. The voracious death, insanity and lameness from the bites of spiders are probably untrue.

The species of spider are difficult of enumeration. The spiders of North America have been studied by Hentz, Emerton, Keyserling and Thorell, and no doubt by a number of other men who have specialized in insects, and it is estimated that there are 800 species in North America. The spider has heart, liver, stomach, intestines, lungs and several other interesting organs, as, for example, the spinning glands and spinnerets. It is recorded that a rood many experiments have been made to throw

light on the effect of spider bites on man. One distinguished entomologist actually allowed various species of spiders to bite his hand. Some of these drew blood, giving a sensation like that of a sharp needle prick. The wounds smarted and swelled somewhat and itched when rubbed, producing very much the sensation of mosquito bites, but no permanent ill effects followed.

The Mygalids are one of the best known of the large and heavy spiders. It is a native of tropical and sub-tropical America. It is said that it catches and kills small lizards with its poisonous bite and then sucks the blood of its victim. The body of this spider is dead black and is covered with long reddish-brown hair. It possesses eight eyes, placed close together in the front of its head.

The scientific name of that American spider called the tarantula is *Ctenis California* and it is one of the trap-door spiders. It is common in New Mexico, Arizona and California. According to Klagsberg, this spider digs its hole in a fine soil which when dry is nearly as hard as brick. These spider holes are sometimes nearly an inch in diameter and vary in depth from two or three inches to nearly a foot. The mouth of the hole is enlarged and then closed by a thick cover which fits it tightly. That cover fits into the mouth of the hole very much as a cork does in the neck of a bottle.